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December 27, 2016

**VIA ELECTRONIC FILING**

The Honorable Jocelyn G. Boyd  
Chief Clerk/Administrator  
Public Service Commission of South Carolina  
101 Executive Center Drive, Suite 100  
Columbia, South Carolina 29210

Re: **Duke Energy Progress, LLC – Monthly Power Plant Performance  
Report  
Docket No. 2006-224-E**

Dear Mrs. Boyd;

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of November 2016.

Should you have any questions regarding this matter, please do not hesitate to contact me at 803-988-7130.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff  
Mr. Jeffrey M. Nelson, Office of Regulatory Staff  
Ms. Shannon Bowyer Hudson, Office of Regulatory Staff  
Ms. Nanette Edwards, Office of Regulatory Staff  
Michael Seaman-Huynh, Office of Regulatory Staff  
Ms. Heather Shirley Smith, Duke Energy  
Mr. Scott Elliott, Elliott & Elliott, P.A.  
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC  
Mr. Gary Walsh, Walsh Consulting, LLC

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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Period: November, 2016

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	None					
	2	None					
Harris	1	10/08/2016 - 11/01/2016	1.75	Scheduled	End-of-cycle 20 refueling outage	Refuel and maintenance	Refuel and maintenance
	1	11/01/2016 - 11/11/2016	247.23	Unscheduled	Outage delayed 10.30 days due to reactor head control rod drive nozzles repair	Inspections during refuel and maintenance outage	Indications repaired
Robinson	2	None					

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Lee Energy Complex**

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
1A	10/1/2016 12:48:00 AM To 11/6/2016 11:27:00 AM	Sch	5270 Gas Turbine - Hot End Inspection	Hot gas path inspection	
1A	11/7/2016 8:00:00 PM To 11/8/2016 5:30:00 PM	Sch	5285 Gas Turbine Vibration	Unit retired to repair faulty vibration indication.	
1B	10/29/2016 12:00:00 AM To 11/22/2016 4:23:00 PM	Sch	5270 Gas Turbine - Hot End Inspection	Hot Gas Path Inspection	
1B	11/23/2016 12:50:00 PM To 11/24/2016 3:46:00 PM	Sch	5250 Gas Turbine - Controls And Instruments	Taken offline to repair Tacpac speed pickup.	
IC	10/29/2016 12:00:00 AM To 11/23/2016 3:17:00 PM	Sch	5270 Gas Turbine - Hot End Inspection	Hot Gas Path Inspection	
IC	11/23/2016 4:40:00 PM To 11/23/2016 8:43:00 PM	Sch	4899 Other Miscellaneous Generator Problems	Generator winding temp indication for "C" phase failed	
IC	11/24/2016 4:30:00 PM To 11/27/2016 2:48:00 AM	Sch	5051 Pilot Fuel Piping And Valves	Fuel oil leak on pilot stage can #11	
IC	11/27/2016 2:56:00 AM To 11/27/2016 5:12:00 AM	Unsch	6200 Combined Cycle Instruments And Controls	LoLo IP Drum Level Trip	
ST1	10/29/2016 12:00:00 AM To 11/20/2016 3:27:00 PM	Sch	4260 Turbine Main Stop Valves	Turbine Steam Valve Inspections	

**Mayo Station**

No Outages at Baseload Units During the Month.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Richmond County Station**

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
7	9/10/2016 3:56:00 AM To 11/14/2016 2:11:00 AM	Sch	5274 General Gas Turbine Unit Inspection	U7 Outage for boroscope and generator rotor pull	
7	11/14/2016 5:48:00 PM To 11/15/2016 10:49:00 PM	Sch	5274 General Gas Turbine Unit Inspection	U7 Outage for boroscope and generator rotor rewind.	
7	11/16/2016 5:12:00 AM To 11/19/2016 12:00:00 AM	Sch	5274 General Gas Turbine Unit Inspection	U7 Outage for boroscope and generator rotor pull	
7	11/19/2016 12:00:00 AM To 11/26/2016 8:48:00 PM	Sch	4240 Lp Turbine Bearings	T4 bearing on ST4 running hot during start-up.	
7	11/27/2016 7:39:00 AM To 11/27/2016 11:26:00 AM	Sch	6134 Other Main Steam Valves (including Vent And Drain.	CRH balancing valve closed and not responding to DCS commands	
8	9/10/2016 3:56:00 AM To 11/15/2016 2:26:00 AM	Sch	5272 Gas Turbine - Boroscope Inspection	U8 / PB4 outage Boroscope and ST4 gen rotor rewind.	
8	11/15/2016 6:46:00 PM To 11/19/2016 12:00:00 AM	Sch	5272 Gas Turbine - Boroscope Inspection	U8 / PB4 outage Boroscope and ST4 gen rotor rewind.	
8	11/19/2016 12:00:00 AM To 11/26/2016 8:20:00 PM	Sch	4240 Lp Turbine Bearings	T4 bearing on ST4 running hot during start-up.	
ST4	9/10/2016 3:40:00 AM To 11/19/2016 12:00:00 AM	Sch	4400 Major Turbine Overhaul (720 Hours Or Longer)	PB4 block outage	
ST4	11/19/2016 12:00:00 AM To 11/27/2016 3:00:00 AM	Sch	4400 Major Turbine Overhaul (720 Hours Or Longer)	PB4 Block outage	
9	11/7/2016 5:20:00 AM To 11/9/2016 8:02:00 PM	Sch	6133 Other Lp Steam System Problems	U9 LP drum sensing line leak repairs.	
10	11/4/2016 11:21:00 PM To 11/6/2016 9:59:00 PM	Sch	5041 Gas Turbine - Fuel Piping And Valves	U10 fuel oil leak can 14, nozzle assy replacement	
10	11/7/2016 12:06:00 AM To 11/7/2016 2:15:00 AM	Sch	6113 Other Hp Steam System Problems	U10 HP drum sight glass leak, shut down to isolate	

**Roxboro Station**

No Outages at Baseload Units During the Month.

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Sutton Energy Complex**

Unit	Duration of Outage	Type of Outage	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
1A	11/4/2016 5:25:00 AM To 11/4/2016 8:02:00 PM	Sch	3611 Switchyard Circuit Breakers	Circuit breaker work in the 115kv switchyard	
1A	11/7/2016 12:00:00 AM To 11/16/2016 3:22:00 PM	Sch	5272 Gas Turbine - Borescope Inspection	Borescope Outage	
1B	11/5/2016 12:58:00 AM To 11/12/2016 12:00:00 AM	Sch	5272 Gas Turbine - Borescope Inspection	GT Borescope Inspection Outage	
1B	11/12/2016 12:00:00 AM To 11/12/2016 3:43:00 AM	Sch	5272 Gas Turbine - Borescope Inspection	GT Borescope Inspection Outage	
JB	11/25/2016 3:21:00 PM To 11/25/2016 10:24:00 PM	Unsch	5240 Gas Turbine - Fire Detection And Extinguishing Sys	01B CT tripped to high lel hazardous gas - bad gas sensor #4	
STI	11/4/2016 10:46:00 PM To 11/12/2016 12:00:00 AM	Sch	5272 Gas Turbine - Borescope Inspection	GT Borescope Inspection Outage	
STI	11/12/2016 12:00:00 AM To 11/12/2016 7:04:00 AM	Sch	5272 Gas Turbine - Borescope Inspection	GT Borescope Inspection Outage	

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**November 2016  
Brunswick Nuclear Station**

	<u>Unit 1</u>		<u>Unit 2</u>	
(A) MDC (mW)	938		932	
(B) Period Hours	721		721	
(C) Net Gen (mWh) and Capacity Factor (%)	648,608	95.91	669,488	99.63
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00	1,950	0.29
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	27,690	4.09	534	0.08
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	676,298	100.00%	671,972	100.00%
(K) Equivalent Availability (%)		93.90		99.71
(L) Output Factor (%)		95.91		99.63
(M) Heat Rate (BTU/NkWh)		10,021		10,248

\* Estimate  
FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**November 2016  
Harris Nuclear Station**

	<u>Unit 1</u>	
(A) MDC (mW)	928	
(B) Period Hours	721	
(C) Net Gen (mWh) and Capacity Factor (%)	416,053	62.18
(D) Net mWh Not Gen due to Full Schedule Outages	1,624	0.24
* (E) Net mWh Not Gen due to Partial Scheduled Outages	25,664	3.84
(F) Net mWh Not Gen due to Full Forced Outages	229,432	34.29
* (G) Net mWh Not Gen due to Partial Forced Outages	-3,685	-0.55
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	669,088	100.00%
(K) Equivalent Availability (%)		61.63
(L) Output Factor (%)		94.98
(M) Heat Rate (BTU/NkWh)		10,803

\*Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**November 2016  
Robinson Nuclear Station**

	<u>Unit 2</u>	
(A) MDC (mW)	741	
(B) Period Hours	721	
(C) Net Gen (mWh) and Capacity Factor (%)	549,817	102.91
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-15,556	-2.91
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	534,261	100.00%
(K) Equivalent Availability (%)		100.00
(L) Output Factor (%)		102.91
(M) Heat Rate (BTU/NkWh)		10,423

\* Estimate

FOOTNOTE: D and F Include Ramping Losses



**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Lee Energy Complex**

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	223	222	223	379	1,047
(B) Period Hrs	721	721	721	721	721
(C) Net Generation (mWh)	96,995	30,911	19,358	59,847	207,111
(D) Capacity Factor (%)	60.33	19.31	12.04	21.90	27.44
(E) Net mWh Not Generated due to Full Scheduled Outages	34,331	121,726	135,279	179,059	470,395
(F) Scheduled Outages: percent of Period Hrs	21.35	76.05	84.14	65.53	62.31
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	29,758	29,758
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	10.89	3.94
(I) Net mWh Not Generated due to Full Forced Outages	0	0	505	0	505
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.31	0.00	0.07
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	29,457	7,425	5,640	4,596	47,118
(N) Economic Dispatch: percent of Period Hrs	18.32	4.64	3.51	1.68	6.24
(O) Net mWh Possible in Period	160,783	160,062	160,783	273,259	754,887
(P) Equivalent Availability (%)	78.65	23.95	15.55	23.58	33.68
(Q) Output Factor (%)	77.81	80.63	77.44	63.53	73.40
(R) Heat Rate (BTU/kWh)	9,716	9,701	9,589	4,907	8,312

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Richmond County Station**

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	189	189	175	553
(B) Period Hrs	721	721	721	721
(C) Net Generation (mWh)	15,486	16,033	15,637	47,156
(D) Capacity Factor (%)	11.36	11.77	12.39	11.83
(E) Net mWh Not Generated due to Full Scheduled Outages	114,077	114,345	109,900	338,322
(F) Scheduled Outages: percent of Period Hrs	83.71	83.91	87.10	84.85
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	0
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	484	484
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.38	0.12
(M) Net mWh Not Generated due to Economic Dispatch	6,706	5,891	154	12,750
(N) Economic Dispatch: percent of Period Hrs	4.92	4.32	0.12	3.20
(O) Net mWh Possible in Period	136,269	136,269	126,175	398,713
(P) Equivalent Availability (%)	16.29	16.09	12.51	15.02
(Q) Output Factor (%)	69.78	73.13	96.08	78.08
(R) Heat Rate (BTU/NkWh)	12,289	11,962	0	8,103

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Richmond County Station**

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	214	214	246	674
(B) Period Hrs	721	721	721	721
(C) Net Generation (mWh)	121,790	124,185	166,580	412,555
(D) Capacity Factor (%)	78.93	80.49	93.92	84.90
(E) Net mWh Not Generated due to Full Scheduled Outages	13,418	10,654	0	24,071
(F) Scheduled Outages: percent of Period Hrs	8.70	6.90	0.00	4.95
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	13,667	13,667
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	7.71	2.81
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	19,086	19,455	0	38,542
(N) Economic Dispatch: percent of Period Hrs	12.37	12.61	0.00	7.93
(O) Net mWh Possible in Period	154,294	154,294	177,366	485,954
(P) Equivalent Availability (%)	91.30	93.10	92.29	92.23
(Q) Output Factor (%)	86.45	86.46	93.92	89.32
(R) Heat Rate (BTU/NkWh)	11,432	11,358	0	6,794

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Roxboro Station**

Unit 2

(A) MDC (mW)	673
(B) Period Hrs	721
(C) Net Generation (mWh)	197,507
(D) Capacity Factor (%)	40.70
(E) Net mWh Not Generated due to Full Scheduled Outages	0
(F) Scheduled Outages: percent of Period Hrs	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	0
(H) Scheduled Derates: percent of Period Hrs	0.00
(I) Net mWh Not Generated due to Full Forced Outages	0
(J) Forced Outages: percent of Period Hrs	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0
(L) Forced Derates: percent of Period Hrs	0.00
(M) Net mWh Not Generated due to Economic Dispatch	287,726
(N) Economic Dispatch: percent of Period Hrs	59.30
(O) Net mWh Possible in Period	485,233
(P) Equivalent Availability (%)	100.00
(Q) Output Factor (%)	67.41
(R) Heat Rate (BTU/NkWh)	9,909

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
November 2016**

**Sutton Energy Complex**

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	225	225	267	717
(B) Period Hrs	721	721	721	721
(C) Net Generation (mWh)	75,642	99,401	106,575	281,618
(D) Capacity Factor (%)	46.63	61.27	55.36	54.48
(E) Net mWh Not Generated due to Full Scheduled Outages	55,346	38,644	47,339	141,329
(F) Scheduled Outages: percent of Period Hrs	34.12	23.82	24.59	27.34
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	15,987	15,987
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	8.30	3.09
(I) Net mWh Not Generated due to Full Forced Outages	0	1,586	0	1,586
(J) Forced Outages: percent of Period Hrs	0.00	0.98	0.00	0.31
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,095	1,095
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.57	0.21
(M) Net mWh Not Generated due to Economic Dispatch	31,237	22,594	21,511	75,342
(N) Economic Dispatch: percent of Period Hrs	19.26	13.93	11.17	14.57
(O) Net mWh Possible in Period	162,225	162,225	192,507	516,957
(P) Equivalent Availability (%)	65.88	75.20	66.54	69.05
(Q) Output Factor (%)	79.66	81.48	73.41	77.77
(R) Heat Rate (BTU/NkWh)	11,411	11,291	0	7,050

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Intermediate Power Plant Performance  
Review Plan  
November 2016**

**Mayo Station**

**Unit 1**

(A) MDC (mW)	746
(B) Period Hrs	721
(C) Net Generation (mWh)	167,152
(D) Net mWh Possible in Period	537,866
(E) Equivalent Availability (%)	100.00
(F) Output Factor (%)	52.21
(G) Capacity Factor (%)	31.08

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Intermediate Power Plant Performance  
Review Plan  
November 2016**

<b>Roxboro Station</b>		
	<b>Unit 3</b>	<b>Unit 4</b>
(A) MDC (mW)	698	711
(B) Period Hrs	721	721
(C) Net Generation (mWh)	-2,634	-1,478
(D) Net mWh Possible in Period	503,258	512,631
(E) Equivalent Availability (%)	100.00	100.00
(F) Output Factor (%)	0.00	0.00
(G) Capacity Factor (%)	0.00	0.00

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**December 2015 - November 2016  
Brunswick Nuclear Station**

	<u>Unit 1</u>	<u>Unit 2</u>		
(A) MDC (mW)	938	932		
(B) Period Hours	8784	8784		
(C) Net Gen (mWh) and Capacity Factor (%)	7,302,044	88.62	8,096,028	98.89
(D) Net mWh Not Gen due to Full Schedule Outages	608,590	7.39	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	152,064	1.85	37,444	0.46
(F) Net mWh Not Gen due to Full Forced Outages	165,979	2.01	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	10,715	0.13	53,216	0.65
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,239,392	100.00%	8,186,688	100.00%
(K) Equivalent Availability (%)		88.78		99.48
(L) Output Factor (%)		97.82		98.89
(M) Heat Rate (BTU/NkWh)		10,248		10,449

\* Estimate  
FOOTNOTE: D and F Include Ramping Losses



**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**December 2015 - November 2016  
Harris Nuclear Station**

Unit 1

(A) MDC (mW)	928	
(B) Period Hours	8784	
(C) Net Gen (mWh) and Capacity Factor (%)	7,494,158	91.94
(D) Net mWh Not Gen due to Full Schedule Outages	534,528	6.56
* (E) Net mWh Not Gen due to Partial Scheduled Outages	51,460	0.63
(F) Net mWh Not Gen due to Full Forced Outages	229,432	2.81
* (G) Net mWh Not Gen due to Partial Forced Outages	-158,026	-1.94
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,151,552	100.00%
(K) Equivalent Availability (%)		90.14
(L) Output Factor (%)		101.44
(M) Heat Rate (BTU/NkWh)		10,389

\* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress  
Base Load Power Plant Performance Review Plan**

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**December 2015 - November 2016  
Robinson Nuclear Station**

Unit 2

<b>(A) MDC(mW)</b>	<b>741</b>	
<b>(B) Period Hours</b>	<b>8784</b>	
<b>(C) Net Gen (mWh) and Capacity Factor (%)</b>	<b>6,431,775</b>	<b>98.81</b>
<b>(D) Net mWh Not Gen due to Full Schedule Outages</b>	<b>157,462</b>	<b>2.42</b>
<b>* (E) Net mWh Not Gen due to Partial Scheduled Outages</b>	<b>14,070</b>	<b>0.22</b>
<b>(F) Net mWh Not Gen due to Full Forced Outages</b>	<b>97,281</b>	<b>1.49</b>
<b>* (G) Net mWh Not Gen due to Partial Forced Outages</b>	<b>-191,644</b>	<b>-2.94</b>
<b>* (H) Net mWh Not Gen due to Economic Dispatch</b>	<b>0</b>	<b>0.00</b>
<b>* (I) Core Conservation</b>	<b>0</b>	<b>0.00</b>
<b>(J) Net mWh Possible in Period</b>	<b>6,508,944</b>	<b>100.00%</b>
<b>(K) Equivalent Availability(%)</b>		<b>95.81</b>
<b>(L) Output Factor(%)</b>		<b>102.84</b>
<b>(M) Heat Rate (BTU/NkWh)</b>		<b>10,456</b>

\*Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress  
Base Load Power Plant  
Performance Review Plan  
December, 2015 through November, 2016**

**Lee Energy Complex**

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	196	195	197	378	967
(B) Period Hrs	8,784	8,784	8,784	8,784	8,784
(C) Net Generation (mWh)	1,288,335	1,307,916	1,334,747	2,529,122	6,460,120
(D) Capacity Factor (%)	74.79	76.32	77.03	76.09	76.06
(E) Net mWh Not Generated due to Full Scheduled Outages	195,619	193,562	179,215	244,528	812,924
(F) Scheduled Outages: percent of Period Hrs	11.36	11.29	10.34	7.36	9.57
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	0	113,233	113,233
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.00	3.41	1.33
(I) Net mWh Not Generated due to Full Forced Outages	34,126	317	1,932	148,113	184,487
(J) Forced Outages: percent of Period Hrs	1.98	0.02	0.11	4.46	2.17
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	24,301	24,301
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.73	0.29
(M) Net mWh Not Generated due to Economic Dispatch	204,496	211,997	216,955	264,703	898,151
(N) Economic Dispatch: percent of Period Hrs	11.87	12.37	12.52	7.96	10.57
(O) Net mWh Possible in Period	1,722,576	1,713,792	1,732,848	3,324,000	8,493,216
(P) Equivalent Availability (%)	85.68	89.52	90.18	84.05	86.64
(Q) Output Factor (%)	87.01	89.38	89.43	86.28	87.68
(R) Heat Rate (BTU/NkWh)	9,329	9,293	9,162	4,083	7,233

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
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**Duke Energy Progress  
Base Load Power Plant  
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December, 2015 through November, 2016**

**Richmond County Station**

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	172	170	169	512
(B) Period Hrs	8,784	8,784	8,784	8,784
(C) Net Generation (mWh)	994,702	978,902	1,122,149	3,095,753
(D) Capacity Factor (%)	65.82	65.44	75.52	68.90
(E) Net mWh Not Generated due to Full Scheduled Outages	379,011	373,081	378,468	1,130,559
(F) Scheduled Outages: percent of Period Hrs	25.08	24.94	25.47	25.16
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	5,594	5,594
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.38	0.12
(I) Net mWh Not Generated due to Full Forced Outages	4,285	12,134	0	16,419
(J) Forced Outages: percent of Period Hrs	0.28	0.81	0.00	0.37
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	4,458	4,458
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.30	0.10
(M) Net mWh Not Generated due to Economic Dispatch	133,234	131,707	0	240,113
(N) Economic Dispatch: percent of Period Hrs	8.82	8.81	0.00	5.34
(O) Net mWh Possible in Period	1,511,232	1,495,824	1,485,840	4,492,896
(P) Equivalent Availability (%)	73.97	73.53	73.63	74.25
(Q) Output Factor (%)	88.28	89.09	101.33	92.88
(R) Heat Rate (BTU/NkWh)	11,351	11,163	0	7,177

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
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**Duke Energy Progress  
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**Richmond County Station**

	Unit 9	Unit 10	Unit 11	Block Total
(A) MDC (mW)	193	193	248	634
(B) Period Hrs	8,784	8,784	8,784	8,784
(C) Net Generation (mWh)	1,360,336	1,360,081	1,780,813	4,501,230
(D) Capacity Factor (%)	80.26	80.25	81.64	80.80
(E) Net mWh Not Generated due to Full Scheduled Outages	185,318	188,773	246,749	620,840
(F) Scheduled Outages: percent of Period Hrs	10.93	11.14	11.31	11.14
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	13,667	13,667
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	0.63	0.25
(I) Net mWh Not Generated due to Full Forced Outages	3,563	6,724	38,770	49,057
(J) Forced Outages: percent of Period Hrs	0.21	0.40	1.78	0.88
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	145,663	139,302	101,410	386,375
(N) Economic Dispatch: percent of Period Hrs	8.59	8.22	4.65	6.94
(O) Net mWh Possible in Period	1,694,880	1,694,880	2,181,408	5,571,168
(P) Equivalent Availability (%)	88.81	88.42	86.26	87.73
(Q) Output Factor (%)	92.23	92.89	95.50	93.70
(R) Heat Rate (BTU/NkWh)	11,392	11,295	0	6,856

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
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**Roxboro Station**

Unit 2

(A) MDC (mW)	672
(B) Period Hrs	8,784
(C) Net Generation (mWh)	2,810,418
(D) Capacity Factor (%)	47.62
(E) Net mWh Not Generated due to Full Scheduled Outages	597,932
(F) Scheduled Outages: percent of Period Hrs	10.13
(G) Net mWh Not Generated due to Partial Scheduled Outages	2,584
(H) Scheduled Derates: percent of Period Hrs	0.04
(I) Net mWh Not Generated due to Full Forced Outages	28,228
(J) Forced Outages: percent of Period Hrs	0.48
(K) Net mWh Not Generated due to Partial Forced Outages	7,962
(L) Forced Derates: percent of Period Hrs	0.13
(M) Net mWh Not Generated due to Economic Dispatch	2,454,237
(N) Economic Dispatch: percent of Period Hrs	41.59
(O) Net mWh Possible in Period	5,901,360
(P) Equivalent Availability (%)	89.22
(Q) Output Factor (%)	71.98
(R) Heat Rate (BTU/NkWh)	10,108

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
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**Duke Energy Progress  
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**Sutton Energy Complex**

	Unit 1A	Unit 1B	Unit STI	Block Total
(A) MDC (mW)	198	198	265	662
(B) Period Hrs	8,784	8,784	8,784	8,784
(C) Net Generation (mWh)	1,412,811	1,449,937	1,766,222	4,628,970
(D) Capacity Factor (%)	81.19	83.32	75.81	79.67
(E) Net mWh Not Generated due to Full Scheduled Outages	78,106	53,566	49,918	181,590
(F) Scheduled Outages: percent of Period Hrs	4.49	3.08	2.14	3.13
(G) Net mWh Not Generated due to Partial Scheduled Outages	0	0	45,548	45,548
(H) Scheduled Derates: percent of Period Hrs	0.00	0.00	1.95	0.78
(I) Net mWh Not Generated due to Full Forced Outages	0	1,924	0	1,924
(J) Forced Outages: percent of Period Hrs	0.00	0.11	0.00	0.03
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,268	1,268
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.05	0.02
(M) Net mWh Not Generated due to Economic Dispatch	249,227	234,717	466,965	950,909
(N) Economic Dispatch: percent of Period Hrs	14.32	13.49	20.04	16.37
(O) Net mWh Possible in Period	1,740,144	1,740,144	2,329,920	5,810,208
(P) Equivalent Availability (%)	95.75	97.00	95.86	96.04
(Q) Output Factor (%)	87.40	87.91	78.88	84.09
(R) Heat Rate (BTU/NkWh)	11,419	11,307	0	7,027

Footnote: (R) Includes Light Off BTU's  
Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
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**Mayo Station**

<b>Units</b>	<b>Unit 1</b>
(A) MDC (mW)	735
(B) Period Hrs	8,784
(C) Net Generation (mWh)	1,950,635
(D) Net mWh Possible in Period	6,455,280
(E) Equivalent Availability (%)	87.97
(F) Output Factor (%)	53.17
(G) Capacity Factor (%)	30.22

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.



**Duke Energy Progress  
Intermediate Power Plant  
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**Roxboro Station**

<b>Units</b>	<b>Unit 3</b>	<b>Unit 4</b>
<b>(A) MDC (mW)</b>	694	703
<b>(B) Period Hrs</b>	8,784	8,784
<b>(C) Net Generation (mWh)</b>	2,090,177	2,174,711
<b>(D) Net mWh Possible in Period</b>	6,095,280	6,178,656
<b>(E) Equivalent Availability (%)</b>	91.24	95.31
<b>(F) Output Factor (%)</b>	65.71	71.46
<b>(G) Capacity Factor (%)</b>	34.29	35.20

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress  
Outages for 100 mW or Larger Units  
November, 2016**

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<u>Unit Name</u>	<u>Capacity Rating (mW)</u>	<u>Full Outage Hours</u>		<u>Total</u>
		<u>Scheduled</u>	<u>Unscheduled</u>	
Brunswick 1	938	0.00	0.00	0.00
Brunswick 2	932	0.00	0.00	0.00
Harris 1	928	1.75	247.13	248.98
Robinson 2	741	0.00	0.00	0.00

**Duke Energy Progress**  
**Outages for 100 mW or Larger Units**  
**November 2016**

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	0.00	0.00
Asheville Steam 2	192	227.58	0.00	227.58
Asheville CT 3	185	80.25	0.00	80.25
Asheville CT 4	185	0.00	0.00	0.00
Darlington CT 12	133	95.85	0.72	96.57
Darlington CT 13	133	15.02	0.00	15.02
Lee Energy Complex CC 1A	223	153.95	0.00	153.95
Lee Energy Complex CC 1B	222	548.32	0.00	548.32
Lee Energy Complex CC 1C	223	606.63	2.27	608.90
Lee Energy Complex CC ST1	379	472.45	0.00	472.45
Mayo Steam 1	746	0.00	0.00	0.00
Richmond County CC 1	183	0.00	0.00	0.00
Richmond County CC 2	183	0.00	0.00	0.00
Richmond County CC 3	185	215.00	0.00	215.00
Richmond County CC 4	186	359.77	3.30	363.07
Richmond County CC 6	179	144.00	0.60	144.60
Richmond County CC 7	189	603.58	0.00	603.58
Richmond County CC 8	189	605.00	0.00	605.00
Richmond County CC ST4	175	628.00	0.00	628.00
Richmond County CC 9	214	62.70	0.00	62.70
Richmond County CC 10	214	49.78	0.00	49.78
Richmond County CC ST5	246	0.00	0.00	0.00

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress**  
**Outages for 100 mW or Larger Units**  
**November 2016**

<b>Unit Name</b>	<b>Capacity Rating (mW)</b>	<b>Full Outage Hours</b>		<b>Total Outage Hours</b>
		<b>Scheduled</b>	<b>Unscheduled</b>	
Roxboro Steam 1	380	28.00	0.00	28.00
Roxboro Steam 2	673	0.00	0.00	0.00
Roxboro Steam 3	698	0.00	0.00	0.00
Roxboro Steam 4	711	0.00	0.00	0.00
Sutton Energy Complex CC 1A	225	245.98	0.00	245.98
Sutton Energy Complex CC 1B	225	171.75	7.05	178.80
Sutton Energy Complex CC ST1	267	177.30	0.00	177.30
Wayne County CT 10	192	0.00	0.00	0.00
Wayne County CT 11	192	0.00	0.00	0.00
Wayne County CT 12	193	0.00	0.00	0.00
Wayne County CT 13	185	0.00	2.25	2.25
Wayne County CT 14	197	0.00	0.00	0.00

Units in commercial operation for the full month are presented.  
Pre-commercial or partial month commercial operations are not included.